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Call for papers

On moving towards an ecologically sound society: with special focus on preventing future smog crises in China and globally☆

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While the prolonged, severe smog that blanketed Beijing and many other Chinese cities during the first months of 2013 remain fresh in the public's mind, it will take years, if not decades, to comprehensively understand the full economic, social, human health and environmental impacts of that and other smog episodes.

Concentrated emissions of diverse air pollutants are increasingly resulting in serious regional air pollution problems in China. Coal consumption has been rising annually by more than 200 million tons during the period from 2000 to 2012. The number of cars and motorcycles in China increased twenty times between 2000 and 2010 and is projected to continue to increase very rapidly. Consequently, China's annual emissions of primary particulate matter, sulfur dioxide, nitrogen oxide, ozone and VOCs exceed twenty million tons.

The severe 'normal' air pollution not only causes serious harm to public health, but also results in massive economic losses in many other ways. A new study has documented that the life expectancy of people living in northern China is 5.5 years less than in southern China as a result of the northern notoriously bad air pollution, largely due to the burning of coal for 'free heating' in the winter seasons (Chen et al., 2013). High concentrations of ozone and other air pollutants result in large agricultural losses. Acid rain causes damage to forests and the natural environment, overall and dramatically reduces the life spans of buildings, bridges and other infrastructure. Furthermore, public outcries triggered by the prolonged, widespread smog days in many Chinese cities in 2013 have extensively undermined the government's credibility (Zhang et al., 2012). The recent forest fires in Indonesia that have choked Singapore with smog have stirred international controversy.

More than half a century after the London Killer Smog in 1952, we have made significant progress in understanding air pollution on a number of fronts: improvements in combustion systems, new advances in stationary and mobile emission controls, increased knowledge of health effects of pollutants, developments in instrumentation and sampling technologies, and understanding of the atmospheric transport and transformation of emitted species (Seinfeld, 2004). Meanwhile, the huge economic and social costs associated with air pollution have been documented and various technological means and policy instruments have been developed to reduce or prevent the generation of these types of air pollutants at their sources.

With the benefit of the knowledge and technological progress, efforts by developing countries to clean up their air pollution can benefit from sharing relevant knowledge and experience from developed countries. For instance, the newly released *China's 12th Five-Year Plan for Air Pollution Prevention and Control in Key Regions* has benefited significantly from sharing the US experience in air pollution abatement through the Sino-US bilateral technological cooperation (Zhang et al., 2012). Another success story is that the decade-long scientific consortium and technical cooperation between Hong Kong and Guangdong Province has brought about progress in understanding the regional air pollution issues and in

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accelerating implementation of air pollution prevention measures to reduce the problems at their sources (Chan and Yao, 2008).

Although the traditional coal-burning air pollution has to be addressed, a more complex regional air pollution problem characterized by ozone and $PM_{2.5}$ (fine particular matter which has an aerodynamic diameter less than 2.5 μm and thus can remain suspended in the atmosphere for a long time) has emerged. This also necessitates China and other developing countries to progress in solving these unprecedented environmental challenges.

As the Chinese character for "crisis" (Wei-Ji) embodies both danger and opportunity, the unprecedented public awareness and pressure prompted by the prolonged smog crises in China can help to catalyze the essential and dramatic changes in socioeconomic systems, which are urgently needed. Well-conceived, comprehensive, and preventive approaches to address smog crises can bring about positive human health and environmental improvements far beyond the scope of air quality.

The Special Volume on preventing future smog and air pollution is designed to address the following distinctive dimensions:

First, instead of relying on pollution control, we stress the vital role of pollution prevention in fighting the long-term battles against air pollution in emerging and underdeveloped economies. More assiduous pursuit and adoption of preventive approaches can reduce the trade-offs between economic growth, environmental protection and social justice as well as increase the likelihood of win–win situations.

Second, moving beyond the disciplinary approaches towards abating air pollution, we particularly invite papers that draw on interdisciplinary solutions and explore the nexuses of environmental science and technology, public health, public policy, urban planning, business management, economics, ethics and ecosystem health for this special volume.

Third, sole focus upon end-of-pipe treatment of air emissions cannot solve the air pollution challenge in China and emerging countries given their rapid economic growth, exploding urban populations and rising standards of living. Smog and other types of air pollution have to be addressed by pursuing clean development, energy efficiency, renewable energy, green growth, research and development on clean air societies, education and training on making the transition to post-fossil carbon societies, regulatory approaches to stimulate and monitor progress in effecting the needed transitions and sustainable lifestyles. Papers designed to address and prevent the root causes of air pollution by addressing any/all of these topics will be welcomed.

Fourth, the planning team of this Special Volume especially welcomes comparative research between/among developed countries and developing countries as well as among different developing regions. This type of research can facilitate the knowledge sharing and technology transfer to help to ensure an effective transition to post-fossil-fuel societies in keeping with the 'Third Industrial Revolution' proposed by Dr. Jeremy Rifkin (2011).

We invite review papers, methodological papers, case studies, and book reviews, editorials that include **but are not restricted** to the following topical areas:

- Ecological and environmental dimensions:
  - Impacts of air pollution on plants, agricultural productivity, and food security;
  - Impacts of air pollution on ecosystem services and ecological responses from natural ecosystems;
  - Urban ecology and its role in air pollution prevention;
  - Sustainable urban and community planning to help to prevent or reduce air pollution at the sources;
  - Sustainable urban transportation to help to reduce air pollution;
  - Transition from a coal-based energy system to a low or no fossil fuel energy system;
  - Transition to a post-fossil fuel economy that is based upon dramatically improved societal energy efficiency, a wide mix of renewable energy sources and alternative life-styles.
- Economic and social dimensions
  - Economic, social and ethical assessments of action and inaction in combating smog and other air pollution;
  - Co-benefits or synergies of preventing local/regional air pollution;
  - Development, adoption and assessment of the benefits of preventative approaches to air pollution;
  - Ensure social justice for vulnerable groups to mitigate the negative impacts of air pollution on them and all of society;
  - Public education and engagement to prevent and/or minimize air pollution in all of its forms and dimensions;
  - Explore the dynamic roles and opportunities of community-based organizations and environmental NGOs in motivating governments, educational and research institutions, and businesses/industries to co-work to develop and implement Cleaner Production systems based totally upon renewable energies.
  - Documenting and publicizing the true short and long-term public health impacts of smog and how they can be prevented;
  - Sustainable lifestyles that help to dramatically reduce the generation of air pollutants at their sources.
- Governance and policy dimensions
  - Governance and policy development, implementation and monitoring of the efficacy of the air pollution prevention efforts;
  - Evidence-based policies to prevent or to dramatically reduce air pollution problems at their sources;
  - Developing, testing and implementing a proper mix of policy instruments for preventing or dramatically reducing air pollution at the source;
  - Multi-level governance with combinations of top-down and bottom-up policy interventions designed to promote the transition to post-fossil fuel societies;
  - Policy learning and transfer of lessons learned to accelerate the transition of societies, globally to post-fossil-fuel societies;
  - Lessons learned from developed countries and developing countries in addressing smog pollution in particular and air pollution in general;
  - Leapfrogging over the pollution-intensive economic development stages for developing countries to the economic/technological/ecological approaches that will help societies to transition to post-fossil-energy economies;
  - International cooperation including collaborative research, policy sharing, and technology transfer.

This Call for Papers for this Special Volume of JCLP was designed to provide academics, policy-makers, business managers, environmental NGOs and other interested parties a comprehensive, multi-disciplinary understanding of the multiple sources, complex transformations, and fundamental solutions to smog and other air pollution.

Authors are invited to address the methodological and theoretical issues as well as linkages to other areas of public policy and

business strategy. As a result, policy-makers will be better informed about the science-policy interplay and practical experience of mitigating the problems. Business managers and technicians will learn about innovative technologies and preventive production processes. Environmental NGOs will be provided valuable information to help them orchestrate their social campaigns.

This Special Volume will include comprehensive reviews, theoretical frameworks, broad empirical studies, case studies, governmental or educational initiatives, and notes from the field. Book reviews and editorials are also welcome.

1. Tentative schedule

Contributors with proposals for papers are encouraged to communicate with the co-editors by e-mail. The following schedule will be applied:

- Publish Call for Papers: August 2013

Submission of a 400–500 word, extended abstract to the Editorial Team of this Special Volume by October 15, 2013 to Dr. Han Shi Department of Public Policy, City University of Hong Kong, E-mail: hanshi@cityu.edu.hk

- Abstract submitters will receive responses from the Special Volume Editorial Team by November 1, 2013
- All prospective authors should access and follow the instructions at: Elsevier's EES system (http://ees.elsevier.com/jclepro/default.asp) Authors should submit 'peer-review ready' documents to Elsevier via the EES system by March 31, 2014.
- After the review and revision processes are completed, all accepted papers will be published in a special volume of the Journal of Cleaner Production by late 2014

2. Contributions

Full papers are invited to be considered for publication in this journal special volume. Paper submissions should be between 9000 and 13,000 for comprehensive reviews, between 7000 and 8000 words for theoretical papers with broad empirical studies and between 4000 and 5000 words for governmental or educational initiatives, and notes from the fields. All should be developed based upon the editorial guidelines provided in the instructions for authors for "Journal of Cleaner Production", which can be accessed from the website: http://www.elsevier.com/wps/find/journaldescription.cws_home/30440/authorinstructions.

Upon receipt of the completed documents, three to five independent reviewers will be invited to provide peer reviews for each manuscript. The Special Volume editorial team will supplement the reviewer's comments and recommendations and send them to the authors. When revised papers are received from the authors, the editorial team will evaluate them and either accept them or ask the authors to make additional revisions. Subsequently, upon receipt and acceptance of the author's revised manuscripts, all articles will be published in this Special Volume of the JCLP.

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